

Mineral Industry Surveys

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COBALT IN AUGUST 2005

Revised data for 2004 and 2005 indicate that U.S. cobalt consumption during January through August 2005 was slightly higher than that consumed during the first 8 months of 2004, according to the U.S. Geological Survey.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 29% higher in January through July 2005 than that during the same period in 2004. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 6% lower in January through July 2005 than that during the same period in 2004.

Price

U.S. spot prices for electrolytic cobalt, in dollars per pound from Platts Metals Week, are listed below.

<u>Date</u>	<u>Price range</u>
September 29	14.75-15.25
October 6	14.70-15.30
October 13	14.00-15.00
October 20	13.50-14.50
October 27	13.05-13.30

<u>Month</u>	<u>Average price</u>
September	16.05

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Metal ²	Oxide and other chemical compounds ³	Scrap	Total
2004:				
August ^r	226	163	214	602
September ^r	246	165	191	602
October ^r	318	156	192	666
November ^r	277	161	187	625
December ^r	268	166	198	633
January-August ^r	1,980	1,390	1,410	4,780
January-December ^{r, 4}	3,090	2,040	2,180	7,310
Year ⁵	4,110	2,040	2,300	8,450
2005:				
January	281	175	168	624
February	296	178	168	641
March	247	200	168	615
April	262	175 ^r	168	605 ^r
May	261	178 ^r	168	608
June	255	201 ^r	168	624 ^r
July	245	172 ^r	168	585 ^r
August	254	176	168	597
January-August	2,100	1,450	1,340	4,900

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes metal powder.

³Data may include other cobalt materials.

⁴Data based on monthly reports.

⁵Includes annual reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE¹

(Metric tons, contained cobalt)

End use	2004			2005	
	January- August ^r	January- December ²	Year ³	August	January- August ⁴
Steel	395	591	722	50	397
Superalloys	2,000	3,100	3,650	259	2,170
Magnetic alloys	232	351	396	21	153
Other alloys ⁵	W	W	627	W	W
Cemented carbides ⁶	508	764	765	65	509
Chemical and ceramic uses ⁷	1,460	2,220	2,230	180	1,490
Miscellaneous and unspecified	181	270	63	23	181
Total	4,780	7,310	8,450	597	4,900

^rRevised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Data based on monthly reports.

³Includes annual reports.

⁴Includes revisions to prior months' data.

⁵Includes nonferrous alloys, welding materials, and wear-resistant alloys.

⁶Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

⁷Includes catalysts, driers in paints or related usages, feed or nutritive additives, glass decolorizer, ground coat frit, pigments, and other uses.

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Industry ²			Total	U.S. Government, metal ⁵
	Metal ³	Oxide and other chemical compounds ⁴	Scrap		
2004:					
August	352 ^r	201 ^r	71 ^r	623 ^r	2,730
September	357 ^r	195 ^r	85 ^r	638 ^r	2,700
October	337 ^r	217 ^r	93 ^r	647 ^r	2,700
November	356 ^r	215 ^r	103 ^r	674 ^r	2,700
December ⁶	352 ^r	203 ^r	115 ^r	670 ^r	2,660
Year end ⁷	379	223	117	719	2,660
2005:					
January	347 ^r	200	154	701 ^r	2,590
February	349	210	154	713	2,540
March	344	195	154	692	2,340
April	341	207	154	702	2,220
May	351 ^r	198 ^r	154	703	2,180
June	347 ^r	185	154	686 ^r	2,070
July	370 ^r	199	154	723 ^r	1,930
August	366	191	154	711	1,870

¹Revised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Stocks reported by cobalt processors and consumers.

³Includes metal powder.

⁴Data may include other cobalt materials.

⁵Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

⁶Data based on monthly reports.

⁷Includes annual reports.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY¹

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2004:								
July	458,000	\$18,700,000	117,000	\$4,790,000	182,000	\$2,210,000	599,000	5,000,000
August	371,000	20,100,000	102,000	3,960,000	124,000	1,860,000	483,000	5,480,000
September	666,000	32,600,000	101,000	3,770,000	196,000	2,430,000	799,000	6,280,000
October	598,000	27,500,000	124,000	4,550,000	146,000	2,090,000	731,000	7,010,000
November	578,000	25,300,000	98,200	3,540,000	97,200	1,400,000	678,000	7,690,000
December:	907,000	35,300,000	90,400	3,020,000	175,000	2,290,000	1,030,000	8,720,000
January-July	4,130,000	170,000,000	783,000	26,300,000	978,000	12,000,000	5,000,000	XX
January-December	7,250,000	311,000,000	1,300,000	45,100,000	1,720,000	22,100,000	8,720,000	XX
2005:								
January	727,000	27,000,000	128,000	4,010,000	230,000	2,860,000	897,000	897,000
February	892,000	35,600,000	95,400	2,660,000	191,000	2,730,000	1,030,000	1,930,000
March	544,000	21,000,000	183,000	5,640,000	215,000	2,690,000	747,000	2,680,000
April	818,000	29,800,000	75,100	1,950,000	98,600	1,230,000	907,000	3,590,000
May	885,000	29,900,000	87,600	2,570,000	173,000	1,660,000	1,000,000	4,580,000
June	904,000	30,100,000	91,600	2,620,000	187,000	2,050,000	1,030,000	5,620,000
July:								
Australia	--	--	--	--	--	--	--	241,000
Belgium	33,600	1,190,000	17,100	352,000	3,000	31,000	46,600	493,000
Brazil	40,000	1,300,000	--	--	--	--	40,000	200,000
Canada	66,500	2,340,000	--	--	--	--	66,500	538,000
China	86,400	2,990,000	1,000	25,500	46,100	298,000	98,900	566,000
Colombia	--	--	--	--	651	2,500	176	352
Congo (Kinshasa)	--	--	--	--	--	--	--	19,900
Finland	44,200	1,950,000	43,200	1,020,000	46,900	606,000	94,100	614,000
France	868	66,700	6,050	320,000	--	--	5,230	32,000
Germany	907	39,000	--	--	--	--	907	7,810
India	1,000	30,900	--	--	16,200	113,000	5,370	65,200
Japan	18,000	582,000	3,430	143,000	--	--	20,400	138,000
Korea, Republic of	180	10,200	--	--	--	--	180	23,400
Morocco	42,200	1,090,000	--	--	--	--	42,200	182,000
Norway	184,000	5,640,000	--	--	--	--	184,000	1,610,000
Philippines	--	--	--	--	--	--	--	18,000
Russia	128,000	3,400,000	--	--	--	--	128,000	728,000
South Africa	20,500	614,000	--	--	--	--	20,500	206,000
Sweden	1,880	37,800	--	--	--	--	1,880	3,100
Switzerland	--	--	--	--	--	--	--	2
Taiwan	200	9,400	--	--	--	--	200	1,640
Uganda	--	--	--	--	--	--	--	60,300
United Kingdom	2,620	92,800	48,000	1,050,000	6,900	80,700	38,900	158,000
Zambia	40,000	1,190,000	--	--	--	--	40,000	548,000
Total	712,000	22,600,000	119,000	2,920,000	120,000	1,130,000	835,000	6,450,000
January-July	5,480,000	196,000,000	779,000	22,400,000	1,210,000	14,400,000	6,450,000	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

³Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

⁴Customs value.

⁵Estimated from gross weights.

⁶May include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY ¹

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Quantity	Value ²	Quantity	Value ²	Quantity	Value ²
2004:						
July	14,100	\$687,000	57,400	\$955,000	20,400	\$1,430,000
August	949	62,800	118,000	1,380,000	9,380	858,000
September	7,310	106,000	39,400	411,000	29,500	1,760,000
October	5,710	318,000	55,400	579,000	11,300	856,000
November	6,500	366,000	38,200	366,000	38,900	2,570,000
December	1,650	76,700	93,600	815,000	27,500	1,990,000
January-July	53,400	2,280,000	673,000	7,320,000	113,000	7,410,000
January-December	75,500	3,210,000	1,020,000	10,900,000	230,000	15,400,000
2005:						
January	5,110	190,000	72,000	463,000	12,400	938,000
February	89	16,700	24,100	380,000	18,800	1,360,000
March	1,100	52,200	82,000	887,000	15,800	1,100,000
April	1,080	65,100	47,400	571,000	31,700	2,030,000
May	11,100	348,000	75,400	845,000	21,300	1,550,000
June	500	33,000	120,000	1,060,000	20,500	1,540,000
July:						
Belgium	1,410	47,900	--	--	--	--
Canada	--	--	--	--	1,750	341,000
France	--	--	--	--	2,960	217,000
Germany	--	--	--	--	2,840	89,500
Ireland	--	--	10,400	164,000	--	--
Japan	400	25,100	--	--	2,100	112,000
Singapore	--	--	890	9,450	--	--
Tunisia	--	--	3,430	52,100	--	--
United Kingdom	181	22,700	2,440	50,500	17,600	975,000
Total	1,990	95,700	17,100	276,000	27,300	1,730,000
January-July	20,900	800,000	438,000	4,480,000	148,000	10,300,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs value.

Source: U.S. Census Bureau.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS¹

(Kilograms, gross weight of material, except as noted)

Period	Unwrought cobalt, powders, matte, waste and scrap ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2004:								
July	203,000	\$8,580,000	15,400	\$527,000	41,700	\$480,000	224,000	1,580,000
August	289,000	7,150,000	41,100	2,060,000	66,200	683,000	334,000	1,920,000
September	118,000	5,300,000	2,450	66,300	29,100	270,000	127,000	2,050,000
October	127,000	4,700,000	20,100	671,000	12,700	136,000	145,000	2,190,000
November	119,000	5,750,000	20,700	693,000	125,000	360,000	164,000	2,360,000
December	130,000	4,350,000	7,690	180,000	56,000	381,000	149,000	2,500,000
January-July	1,330,000	52,100,000	232,000	10,200,000	377,000	3,660,000	1,580,000	XX
January-December	2,110,000	79,400,000	324,000	13,800,000	666,000	5,490,000	2,500,000	XX
2005:								
January	122,000	5,590,000	27,300	596,000	59,600	398,000	156,000	156,000
February	120,000	3,990,000	52,200	1,610,000	118,000	363,000	186,000	342,000
March	107,000	4,650,000	57,500	1,260,000	145,000	489,000	183,000	525,000
April	154,000	6,380,000	36,900	862,000	36,500	380,000	189,000	714,000
May	207,000	5,980,000	93,500	2,250,000	36,600	205,000	283,000	998,000
June	170,000	5,710,000	107,000	1,860,000	26,300	217,000	254,000	1,250,000
July	174,000	5,280,000	39,700	818,000	75,200	621,000	221,000	1,470,000
January-July	1,050,000	37,600,000	414,000	9,250,000	498,000	2,670,000	1,470,000	XX

XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

³Cobalt acetates and cobalt chlorides.

⁴Free alongside ship (f.a.s.) value.

⁵Estimated from gross weights.

⁶Year to date may include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE,
AND CONCENTRATES¹

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value ²	Quantity	Value ²
2004:				
July	89,600	\$3,520,000	14,100	\$709,000
August	135,000	4,480,000	47,000	568,000
September	69,000	3,720,000	2,500	96,800
October	107,000	5,210,000	12,700	134,000
November	119,000	5,090,000	34,800	213,000
December	85,300	4,620,000	25,300	60,100
January-July	632,000	25,300,000	795,000	19,500,000
January-December	1,150,000	48,400,000	917,000	20,600,000
2005:				
January	184,000	6,490,000	69,000	2,800,000
February	235,000	8,710,000	8,390	254,000
March	147,000	6,540,000	40,700	556,000
April	184,000	6,530,000	33,000	818,000
May	129,000	6,080,000	49,200	1,300,000
June	230,000	9,230,000	36,200	1,200,000
July	224,000	8,410,000	--	--
January-July	1,330,000	52,000,000	237,000	6,920,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Free alongside ship (f.a.s.) value.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.